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A NEW SPECIES OF *ORMISCODES*
(*DIRPHIELLA*) FROM MEXICO
(SATURNIIDAE: HEMILEUCINAE)

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UNTIL NOW, the subgenus *Dirphiella* Michener contained only a single species. The second species, described here, differs remarkably in general appearance from *O. (D.) albofasciata*, although the two are structurally very similar. The females of both species are unknown.

Genus *ORMISCODES* Blanchard, 1852:61

Subgenus *DIRPHIELLA* Michener, 1949a:130 (nomen nudum!); 1949b:146. Type: *Dirphiopsis albofasciata* Johnson and Michener, 1948:11. Monobasic.

ORMISCODES (*DIRPHIELLA*) *TAYLORI* Donahue and
Lemaire, new species
(figures 1 and 2)

DIAGNOSIS

General appearance entirely different from that of *O. (D.) albofasciata* (figure 3), the only other member of this subgenus. *O. taylori* is easily distinguished from *albofasciata* by the yellowish brown ground color (dark brownish gray in *albofasciata*), completely yellow antennae (orange-yellow shaft and blackish rami in *albofasciata*), conspicuous, straight, double black and white postmedian band on forewing, from inner margin to apex (all white and sigmoid in *albofasciata*, from inner margin to costa), forewing apex acute (rounded in *albofasciata*), absence of color bands on dorsum of abdomen (present in *albofasciata*), presence of epiphysis (absent in *albofasciata*), and presence of apical cornutus on vesica of male genitalia (absent in *albofasciata*). In general appearance *taylori* is perhaps more reminiscent of members of *Dirphia* (subgenus *Dirphiopsis*) than of any other species of *Ormiscodes*.

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DESCRIPTION: Holotype male (fig. 2)

Head: *Antenna* pale yellow, scape clothed with small appressed scales, dark brown dorsally and paler ventrally; flagellum (37 segments) bipectinate to apex, rami with 2 or 3 terminal and subterminal bristles, the longest one 3 times as long as setae; ventral antennal cones conspicuous only on terminal 12 segments, increasing in prominence distally; each segment with 2-5 midventral setae, most numerous on distal segments, and 1 or 2 mid-dorsal setae on proximal 15 segments. *Eye* large, extending from antennal socket to ventral edge of frons, eye height three times shortest interocular distance. *Labial palpi* with blackish brown, appressed, hair-like scales which project ventrally. Vestiture of *frons* hair-like, blackish brown and erect dorsally, ventrally becoming almost black, projecting ventrad and curving slightly mesad. Vestiture of *vertex* consists of loose, spreading, grayish brown hair-like scales.

Thorax: Vestiture of loose, spreading, hair-like scales as follows: patagium anteriorly narrowly edged pink, centrally grayish brown, becoming darker laterally to blend with blackish brown of wing base; mesonotum with appressed brown hair-like scales, overlain by looser, paler scales. Mesoscutellum and metanotum with long, deep pink scales, extending posteriorly over first two abdominal segments. *Tegula* pale gray-brown. *Venter* of thorax densely clothed with hair-like scales, blackish brown between forecoxae and in anterior axillary region, deep pink elsewhere including a narrow longitudinal fringe parallel to and at the base of the posterior half of the hindwing. *Legs:* brown dorsally, paler ventrally and posteriorly, pink ventral fringe on femora and brown fringe on tibiae (posterior on foreleg, dorsal on mid- and hindlegs); *foreleg* femoral fringe pale pink, the hair-like scales paler at base; epiphysis large (nearly 1/2 tibial length), "J"-shaped, the apex projecting posterad, with pale yellowish white tuft internally and apically; first two tarsal segments with tapering dorso-posterior fringe; *midleg* as in foreleg but femoral fringe darker pink; external (ventral) surface of tibial spurs clothed with appressed pale brown scales; basitarsus with very weak dorsal fringe; *hindleg* identical to midleg except basitarsal fringe more strongly developed.

Abdomen: Dorsum of first segment clothed with long, loose, pink hair-like scales which overlay and conceal two narrow, transverse, subdorsal patches of short blackish brown scales on the posterior margin of the segment; dorsum of segments 2-7 uniformly clothed with small, spatulate, medium gray, appressed scales, intermixed with and almost totally concealed by much longer brownish black, semi-erect hair-like scales; dorsum of segment 8 and genitalia with tuft of loose, pink hair-like scales. Dorsal brownish black ground color extending ventrad to clothe pleural area, interrupted in the posterior fourth of each segment by a tuft of pink scales. Ventral vestiture of appressed hair-like scales yellowish brown, segments 2-7 with mesal grayish brown line.

Wings: General: ground color of both surfaces of wings yellowish brown, slightly paler on hindwing upperside; fringes paler; veins brownish black except across the white postmedial (PM) band on forewing upperside; discocellular spots absent on upperside, present on underside as narrow brownish black lines on R_{4-5} - M_1 crossvein of forewing and on anterior third of M_2 - M_3 crossvein of hindwing. *Forewing upperside:* antemedial (AM) line evanescent, a faint blackish shade arising at one fourth on inner margin, extending in nearly straight line, more or less parallel to outer margin, to the anterior margin of discal cell at a point approximately 1 mm proximal of origin of vein R_1 , then angling about 90° and continuing to the costa as a broader, more diffuse but darker shade, its course indicated by further darkening of veins where it crosses anterior edge of cell, vein Sc, and the costa; AM line bordered externally by a narrow, diffuse white shade, which expands abruptly at the anterior edge of the discal cell to

form an irregular, squarish, poorly defined whitish spot filling the area between the discal cell and costa, extending from the AM shade approximately to the origin of vein R_1 , the distal edge more or less perpendicular to costa. Area basad of the AM line is slightly darker between the costa and the posterior margin of the discal cell. Postmedial (PM) band conspicuous, oblique, blackish, about 1 mm wide, extending from inner margin at about three-fifths to apex at end of vein R_2 ; almost straight, but most notably offset outward in cell R_2 - R_3 ; PM band bordered internally by a white band of similar width along its entire length, and bordered externally by a broad, obscure, fuscous shade, broadest at the inner margin, extending from tornus to vein R_3 , where it fuses with the PM band; outer margin of this shade dentate: concave on veins, convex in cells, the teeth strongest in cell Cu_1 - Cu_2 and becoming weaker anteriorly. Costal margin dark brown from base to the white subcostal spot, concolorous with ground color beyond the spot. *Hindwing upperside*: postmedial band black, more or less parallel to outer margin, extending from inner margin at about three-fifths (where it widens on the margin itself) to the costa at seven-eighths, external edge diffuse, internally bordered by a narrower, diffuse whitish shade. Ground color basad of PM band slightly paler than area distad of PM band. *Underside* of both wings similar to upperside, except that the ground color of both wings is uniformly yellowish brown and the markings are less pronounced. *Forewing*: AM line and subcostal white spot absent, PM band weaker and more diffuse than on upperside, with internal white edging only faintly indicated and the distal shade absent; base of forewing with diffuse blackish shade corresponding to the weaker shade on upperside. *Hindwing*: compared to upperside, PM band slightly wider and more diffuse, internal white edge broader and more conspicuous; PM band weakly sigmoid, incurved between veins 2A and Cu_1 , excurved and more or less parallel to outer margin between Cu_1 and costa. Costa whitish from base to PM band. Subterminal band extremely faintly indicated, parallel to outer margin and slightly nearer it than to PM band.

Genitalia (fig. 3): almost identical to that of *Ormiscoodes* (*Dirphiella*) *albofasciata* (as figured by Michener, 1952:488, figs. 328-332), with the conspicuous exception that the apex of the vesica bears a small, stout cornutus which that species lacks. In addition, the dorsal lobes of the valva appear to be slightly longer and basally broader in *taylori* than in *albofasciata*.

Size: forewing length 31mm.

Female: unknown.

Variation: the paratype differs from the holotype in minor details, as follows: smaller (forewing 28mm long); antennae with more flagellar segments (38 right, 39 left); proximal 20 (right) or 21 (left) segments with dorsal setae; markings and ground color of forewing upperside slightly darker: AM line more pronounced and the dentate shade distad of PM band much more conspicuous; underside of both wings darker: forewing with darker basal anterior shading, and the shade distad of PM band evident (as pronounced as on *upperside* of holotype); hindwing with subterminal band stronger, extending from vein 2A to vein R.

Additional material: excluded from the type series, but representing this or a very closely related species, is a slightly rubbed male in the LACM collection from 24 miles south of Valle Nacional, Oaxaca, Mexico, elevation 5,600 feet, 24-25 July 1970 (E. Fisher and P. Sullivan). This locality is approximately 120 air miles south-southeast of the type locality of *taylori*. The Oaxacan male bears a very close external resemblance to the type specimens, and may represent individual or geographic variation—a point that can be resolved only after the examination of additional material. This specimen differs from typical *taylori* as follows: slightly larger (forewing length 32.5mm), antenna with 42 segments, only the basal 10 with

single dorsal setae. Discocellular scaling conspicuous on upperside of both wings, and more pronounced on underside than in *taylori*. Forewing upperside with AM line placed farther distad, entering discal cell at vein Cu₂ then angling across to origin of vein R₁ where it angles proximad to costa; white external edge of AM line broader, more conspicuous and more extensive, extending to vein 2A, almost completely filling the triangular portion of discal cell distad of AM line, and expanding to form the whitish costal spot farther distad than in *taylori*, the spot extending from origin of vein R₁ halfway to fork of R₂ and R₃; PM band directed to a point on costa before apex, then angling on vein M₁ and continuing, more or less straight, to a point just below apex. Forewing underside lacking fuscous suffusion in discal cell, PM band as above except angled at vein R₄. Fronto-clypeal protuberance produced into a truncate, triangular projection. There are also several slight differences in the shape of the uncus, gnathos, transtilla, and lobes of the valva of the male genitalia.

TYPES: HOLOTYPE ♂, 1 mile south of Pueblo Calchualco, 8 road miles west of Coscomatepec, Veracruz, MEXICO; elevation 6,200 feet, 26 July 1972 (Terry W. Taylor); collected in the rain at a 15-watt fluorescent black light, between 10:00 and 10:30 p.m. Central Daylight Time, ambient temperature 45°F. (C. Lemaire genitalic preparation no. 2637, in glycerine).

PARATYPE, 1 ♂, same locality as holotype, 21 July 1973 (Terry W. Taylor and Roy R. Snelling); collected at a mercury vapor light between 10:00 and 11:00 p.m. Central Daylight Time, ambient temperature 59°F. Holotype and paratype deposited in the Natural History Museum of Los Angeles County, through the courtesy of Terry W. Taylor.

DISCUSSION

Michener erected the subgenus *Dirphiella* for the lone species *Dirphiopsis albofasciata* Johnson & Michener, then known from a single male from Chiapas, Mexico (“. . . presumed to be from the vicinity of Comitán.”). It is unique among the nine subgenera of *Ormiscodes* in that the male antenna is bipectinate instead of quadripectinate. Michener (1952:445-446) later expanded the definition of this subgenus in his revision of the higher categories of the New World Saturniidae.

One of us (JPD) has examined the type specimen of *D. albofasciata*, and found that the original description is defective with respect to several antennal characters, as follows: the antennal shaft and extreme bases of the rami are orange-yellow, contrasting sharply with the brownish black of the rami (not “antennal shafts brown, rami black”); each antennal segment has two

stout, subapical, para-medial setae on the ventral side, plus numerous scattered, small, brown lateral setae which contrast with the color of the shaft; mid-dorsal setae not evident (not "segments of antennal shaft of male without setae or with a single dorsal subapical seta"); terminal bristle of rami about three times as long as longest setae, subterminal bristle present on some rami (not "terminal bristles of rami nearly twice as long as setae"). There are 39 segments in each antennal shaft. Unfortunately, it was not possible to verify the absence of the epiphysis, as the forelegs are represented by a single femur, and a patch of scales on the locality label, where one foreleg had apparently been glued and subsequently fallen off.

However, the junior author has verified the absence of the epiphysis in several specimens of *albofasciata* (all males) in his collection from several localities in Chiapas. These specimens indicate that *albofasciata* is very variable in color and maculation. The ground color of the upper surface of the wings varies from pale to deep black; the postmedian bands (sometimes partly or even entirely absent) vary in color from pure white to orange yellow; in specimens with the orange-yellow bands the median area of the forewing and the postmedian (and sometimes the median) area of the hindwing are more or less suffused with the same orange-yellow color or with yellowish brown; the width of the fringes varies, as does their white or yellow color, and there are generally black dots in the fringe at the ends of the veins.

With the discovery of this second species of *Dirphiella* it is necessary to modify the definition of the subgenus, as some of the original characters, as amended above, now appear to be of only specific significance. These characters as they occur in *taylori*, and their corresponding state in *albofasciata*, are as follows: epiphysis present in male (absent in *albofasciata*); antennal cones conspicuous only on terminal 12 or fewer segments (recognizable nearly to base in *albofasciata*); eyes large, height of eye three times shortest distance between eyes (subequal in *albofasciata*).

These differences, plus the entirely different facies, would appear to be sufficient to warrant the erection of a new subgenus for *taylori* were it not for the extreme similarity in genitalia.

We take pleasure in naming this species in honor of Terry W. Taylor, who collected the type series and brought them to our attention. We are further indebted to Charles L. Hogue

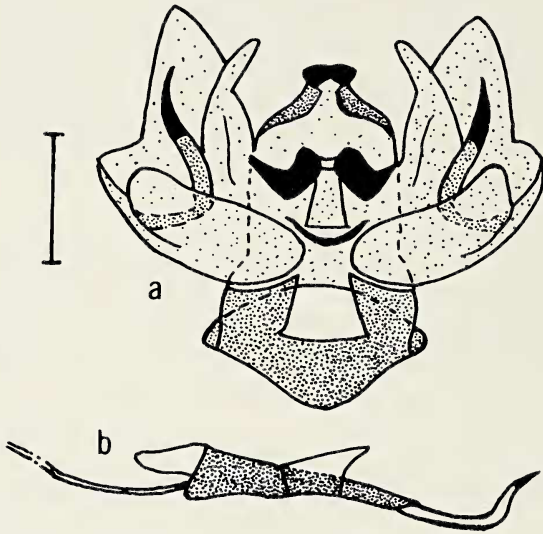


Fig. 1.—*Ormiscodes (Dirphiella) taylori*, genitalia of male holotype: a.—ventral view, aedeagus removed; b.—aedeagus, lateral view.

for his valuable comments and suggestions on the manuscript, and to Frederick H. Rindge of the American Museum of Natural History, who kindly loaned the type specimen of *Dirphiopsis albofasciata*.

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Fig. 2 (top).—*Ormiscodes (Dirphiella) taylori*, dorsal view of holotype male. Approximately 1.4 times actual size.

Fig. 3 (bottom).—*Ormiscodes (Dirphiella) albofasciata*, dorsal view of holotype male. Approximately 1.6 times actual size.